

WHAT IS CLAIMED IS:

1. A composition for removing a contaminant from a gas comprising: (1) a silicate compound and (2) a sequestrant.
2. The composition of claim 1, wherein the silicate compound is selected from at least one member of the group consisting of: sodium orthosilicate, sodium sesquisilicate, sodium sesquisilicate pentahydrate, sodium metasilicate (anhydrous), sodium metasilicate pentahydrate, sodium metasilicate hexahydrate, sodium metasilicate octahydrate, sodium metasilicate nanohydrate, sodium disilicate, sodium trisilicate, sodium tetrasilicate, potassium metasilicate, potassium metasilicate hemihydrate, potassium silicate monohydrate, potassium disilicate, potassium disilicate monohydrate, potassium tetrasilicate, potassium, and tetrasilicate monohydrate.
3. The composition of claim 2, wherein the silicate compound is sodium metasilicate.
4. The composition of claim 1, wherein the sequestrant is selected from at least one member of the group consisting of: sodium gluconate, sodium citrate, sodium p-ethylbenzenesulfonate, sodium xylenesulfonate, citric acid, and EDTA.
5. The composition of claim 4, wherein the sequestrant is sodium gluconate.
6. The composition of claim 1, further comprising at least one compound selected from the group consisting of butyl diglycol, dipropylene glycol and EDTA.
7. The composition of claim 1, further comprising a surfactant.
8. A composition for removing a contaminant from a gas comprising sodium metasilicate, sodium gluconate and butyl-diglycol.
9. A composition for removing a contaminant from a gas comprising EDTA, sodium metasilicate, and butyl-diglycol.
10. The composition of claim 9, further comprising a surfactant.
11. A composition for removing a contaminant from a gas comprising dipropylene glycol, and sodium metasilicate.
12. The composition of claim 11, further comprising a surfactant.

13. A method for separating a contaminant from a stream of contaminated air, comprising:

(a) passing said contaminated air into a contact zone in which is disposed a composition of any one of claims 1 to 12;

(b) withdrawing from said contact zone air depleted of said contaminant.

14. The method of claim 13, wherein the contaminant is selected from at least one member of the group consisting of CO_x, SO_x, NO_x, H₂S, IHAP, benzene, formaldehyde, acetone, toluene, methylene chloride and mercury.